

Listing of Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) An interface cable adapted to connect to a sensor, said interface cable comprising:

a unitary cable structure comprising first and second cable portions;

said first cable portion comprising first power supply leads and first sensor leads having first and second ends;

said second cable portion comprising second power supply leads and at least one second sensor lead having first and second ends;

an elongated shroud structure including an elongated circuit board having a longer longitudinal dimension than a width dimension and comprising opposing first and second longitudinal edges;

said first end of said first power supply leads and said first sensor leads of said first cable portion being attached to said first longitudinal edge of said elongated circuit board;

said first end of said second power supply leads and said at least one second sensor lead of said second cable portion being attached to said second longitudinal edge of said elongated circuit board;

a power convertor mounted to said elongated circuit board for converting AC power supplied to said second end of said first power supply leads to DC power to be supplied to said second end of said second power supply leads located distally from said circuit board
~~enveloped in a shroud formed integrally with said cable between said first and second cable portions;~~

a sensor interface mounted to said elongated circuit board located in said shroud and forming a connection between said first sensor leads and said at least one second sensor lead to convert either a DC sensor signal, comprising either a current sourcing or current sinking output, supplied at said second end of said at least one second sensor lead to an AC sensor signal, comprising a switching output, to be supplied to said second end of said first sensor leads located distally from said circuit board;

~~said power convertor converting power input from said first power supply leads to a power form for powering a sensor; and~~

~~said sensor convertor converting a sensor output provided through said at least one second sensor lead to a different sensor output form for said first sensor leads~~

a potting material encasing said elongated circuit board including said power convertor and said sensor interface; and

an overmold material surrounding said potting material and extending past said first and second ends of said circuit board and covering said first ends of said first and second cable portions.

Claims 2-5 (canceled)

6. (Currently amended) The interface cable of claim [[5]] 1 wherein said sensor convertor comprises an optoisolator triac.

Claim 7 (canceled)

8. (Currently amended) The interface cable of claim 1 wherein said elongated shroud structure defines an elongated cylindrical member having a length dimension extending ~~generally~~ in a direction of extension of said first and second cable portions from said first and second edges of said circuit board, said cylindrical member including tapered ends tapering from an outer surface of said elongated cylindrical member toward said first and second cable portions.

9. (Currently amended) The interface cable of claim 8 wherein said elongated shroud structure defines a maximum diameter dimension which is less than 1 inch.

Claims 10-11 (canceled)

12. (Currently amended) The interface cable of claim [[10]] 1 wherein said potting material comprises an epoxy material.

Claim 13 (canceled)

14. (Currently amended) The interface cable of claim [[13]] 1 wherein said overmold material comprises PVC.

Claims 15-20 (canceled)

21. (new) The interface cable of claim 1 wherein said circuit board comprises a length that is at least about five times its width.

22. (new) The interface cable of claim 21 wherein said overmold defines a circumference of said elongated shroud structure, and a diameter of said elongated shroud structure across said circumference is no more than one inch.